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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/026,877 | 12/27/2001 | Makoto Yoshida | 111580 | 9977 |

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OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

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| EXAMINER |
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OMETZ, DAVID LOUIS

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| ART UNIT | PAPER NUMBER |
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2653

DATE MAILED: 02/03/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/026,877

Applicant(s)

YOSHIDA ET AL.

Examiner

David L. Ometz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 4-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 10-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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1. Applicant's election with traverse of Species I, figures 2-6 in Paper No. 9 is acknowledged. The traversal is on the ground(s) that there would be no undue burden placed upon the examiner in examining the remaining species. This is not found persuasive because the undue burden placed upon the examiner is the search requirements needed to search for all three separate species embodiments.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 4-9 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species II and III, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 9. It is noted by the examiner that applicant has incorrectly listed the generic claims which are readable upon elected species I. Specifically, applicant discloses in the response dated 1/15/04 that "generic claims 1-3 and 6-10 read on this species." However, the correct list of claims readable upon elected species I is claims 1-3, 10-16.

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

4. The disclosure is objected to because of the following informalities: on page 13, line 12, "thermal diffusion film 37" should be changed to --thermal diffusion film 381--.

Appropriate correction is required.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 1, 2, 3, 15 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 62-128011. JP'011 shows a thin film magnetic head on a slider 7 in figure 1 that has: a first magnetic film 2; a second magnetic film 3; a gap film formed between the first and second magnetic films; a coil film 1; and an insulating film 4 encapsulating the coil film 1; the forefronts of the magnetic films 2,3 are opposed via the gap layer; the magnetic films 2,3 are connected at the back region wherein the coil film 1 winds around the backward joined portion; a thermal diffusion film 9 made of a metallic film (same as the coil film 1) and integral with the coil film 1. The head supporting apparatus of claim 15 would be inherent for proper use of the thin film magnetic head disclosed by JP'011.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 10-14, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '011 in view of Fukuda et al (US Pat 6144533). JP'011 shows a thin film magnetic head in figure 1 as disclosed, *supra*. However, JP'011 does not show the inductive thin film magnetic head combined with an MR head in a merged/piggyback configuration nor does JP'011 disclose the use of the head in a disk drive as per claim 16. The reference to Fukuda et al shows a merged MR/inductive head in figure 1 that has a first shield 31, an MR element 33 (spin valve/tunnel junction), and second shield 212 wherein the head is used in a disk drive (see col. 1, line 13, and col. 5, lines 25-53). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inductive head of JP'011 into a merged

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MR/inductive head as taught by Fukuda et al as doing this would permit individual optimization of both the read head (MR, i.e. spin valve, tunnel junction, perovskite-type) and the write head (i.e. inductive) while also permitting efficient packaging by combining both on the same head chip. Secondly, with regard to the use of the merged MR/inductive head in a disk drive, one of ordinary skill in the art would have been motivated to use the merged MR/inductive head of JP'011 and Fukuda et al in a disk drive so as to permit large amounts of data to be stored and read by the merged head. The use of merged MR/inductive heads are old and well known in the art of disk drives as evidenced by the teachings of Fukuda et al.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references cited all show differing methods of diffusing heat away from the magnetic head due to the heat generated by the inductive coil portion.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Ometz whose telephone number is (703) 308-1296. The examiner can normally be reached on M-W, 6:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (703) 305-6137. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.

David L. Ometz
Primary Examiner
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DLO
1/29/04